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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/082,156	02/26/2002	Mahito Yoshioka	03500.016236	3428

5514 7590 01/23/2003

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EXAMINER

GLEITZ, RYAN M

ART UNIT

PAPER NUMBER

2852

DATE MAILED: 01/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Ans

Office Action Summary	Application No.	Applicant(s)	
	10/082,156	YOSHIOKA ET AL.	
	Examiner	Art Unit	
	Ryan Gleitz	2852	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 December 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-4 are finally rejected under 35 U.S.C. 103(a) as being unpatentable over Kimura et al. (USPN 5,250,999) in view of Ohtsuka et al. (USPN 5,331,385), and further in view of Tomizawa et al. (USPN 6,253,041).

Kimura et al. disclose an image forming apparatus comprising: an image bearing member (2); a transfer member (10) for transferring an image from the image bearing member to a recording material; fixing means (14) for fixing the transferred image onto the recording material, the fixing means including a heating member (31) and back-up roller (14b) for forming a nip in cooperation with the heating member; wherein the apparatus is selectively operable in a normal mode for a case in which the recording material is paper and in a resin sheet mode (Col. 4, ln. 32-39), and wherein a voltage applied to the transfer member when the resin sheet mode is selected is lower than a voltage applied to the transfer member then the normal mode is selected, wherein the voltage applied to the transfer member when the resin sheet mode is selected is 3% to 80% (Col. 5, ln 8-12, please note that the units V are in error and should be kV) of the voltage applied to the transfer member when the normal mode is selected.

Kimura et al. does not disclose a back-up roller containing a conductive material layer of limited resistance.

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However, Ohtsuka et al. disclose such a back-up roller (2) that has a conductive material containing layer (26d), with a conductive layer of limited resistance, wherein the resistance value of the conductive material containing layer of the back-up roller is equal to or less than $10^{13} \Omega$ /□ in terms of surface resistance or equal to or less than $10^{11} \Omega \bullet \text{cm}$ in terms of volume resistance (Col. 3, ln. 60-69).

Ohtsuka et al. also disclose a back-up roller (2) with an elastic layer (13) and a surface resin layer (18), and at least one of the elastic layer and the surface resin layer is the conductive material containing layer (Col. 3, ln. 41-55).

It would have been obvious to one with ordinary skill in the art at the time of the invention was made to limit the volume resistance of the conductive layer on a back-up roller of the image forming apparatus disclosed by Kamura et al. since such a configuration is well known to reduce the occurrence of triboelectrification and image offset by allowing the electric charge to flow to the ground through the rubber roller as disclosed by Ohtsuka et al. (Col. 4, ln. 1-5).

Kimura et al. and Ohtsuka et al. disclose all of the limitations above including a resin sheet mode in which a voltage is applied to a transfer member that is lower than a voltage in normal mode but do not disclose expressly when the resin sheet mode is selected the absolute value of a front surface potential of the resin sheet becomes small.

Tomizawa et al. discloses that the surface potential of a sheet is proportional to the supplied charge amount (Col. 6, ln. 60-62). Therefore, if the voltage is lowered as taught by Kimura et al., the surface potential on the sheet will also be lowered or become small.

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It would have been obvious at the time of the invention to one with ordinary skill in the art that the image forming apparatus of Kimura et al. and Ohtsuka et al. would include a small surface potential of a resin sheet when the transfer voltage used in resin sheet mode is lower than that of normal mode as taught by Tomizawa et al..

Response to Arguments

Applicant's arguments filed November 26, 2002 regarding the amended claims 1-4 have been fully considered but they are not persuasive. The feature, an absolute value of a front surface potential of the resin sheet becomes small, is said to not be understood from Kimura et al.. It is also not understood from Kimura et al. the front surface potential of the OHP sheet in the OHP sheet mode is different from any other mode.

However, Kimura et al. show three modes of printing: monochrome printing in normal mode, full color printing in normal mode, and normal mode and full color printing in OHP mode. Kimura et al. does not discuss expressly the surface potential of the OHP sheet. The Examiner believes that it is the nature of biased transfer rollers that if the voltage applied to the transfer roller is increased or decreased, the surface potential on a sheet in the nip of the roller will become large or small respectively. The Tomizawa et al. reference is included to expressly disclose this principle.

Conclusion

Applicant's arguments with respect to originally filed claims 1-4 have been considered but are moot in view of the new grounds of rejection.

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Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

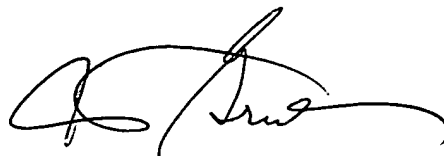
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan Gleitz whose telephone number is (703) 305-7388. The examiner can normally be reached on Monday-Friday between 8:00AM and 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley can be reached on (703) 308-1373. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3431 for regular communications and (703) 305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


rg
January 17, 2003


Arthur T. Grimley
Supervisory Patent Examiner
Technology Center 2800